Release Notes

HP StorageWorks Novell NetWare Kit for Enterprise Virtual Array

Product Version: 3.0E

Fifth Edition (July 2004)

Part Number: AV-RUHTE-TE

This document contains the most recent product information about the HP StorageWorks Novell NetWare Kit V3.0E used for integrating host servers with the StorageWorks Enterprise Virtual Array (VCS version 3.020).

For the latest version of the Novell NetWare Release Notes and other documentation, access the HP storage web site at http://www.hp.com/country/us/eng/prodserv/storage.html.

© Copyright 2001–2004 Hewlett-Packard Development Company, L.P.

Hewlett-Packard Company makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

This document contains proprietary information, which is protected by copyright. No part of this document may be photocopied, reproduced, or translated into another language without the prior written consent of Hewlett-Packard. The information contained in this document is subject to change without notice.

Compaq Computer Corporation is a wholly-owned subsidiary of Hewlett-Packard Company.

Hewlett-Packard Company shall not be liable for technical or editorial errors or omissions contained herein. The information is provided "as is" without warranty of any kind and is subject to change without notice. The warranties for Hewlett-Packard Company products are set forth in the express limited warranty statements for such products. Nothing herein should be construed as constituting an additional warranty.

Printed in the U.S.A.

HP StorageWorks Novell NetWare Kit for Enterprise Virtual Array Release Notes
Edition (July 2004)
Part Number: AV-RUHTE-TE

About this document

This section covers the following topics:

- Release Notes information, page 3
- Intended audience, page 4

Release Notes information

These release notes cover the following topics:

- Enterprise Virtual Array storage system, page 5
- Supported operating systems, page 7
- Avoiding problem situations, page 9
- Enterprise Storage System notes, page 10
- Storage System Scripting Utility for Enterprise Virtual Array, page 10

Intended audience

This document is intended to assist customers who purchased the StorageWorks Enterprise Virtual Array and the associated StorageWorks Operating System kits. Other associated software packages are:

- StorageWorks Virtual Controller Software Package V3.020 for Dual HSV Controllers
- StorageWorks Snapshot for Virtual Controller Software V3.020 for Dual HSV Controllers

This document is also intended for use by HP Customer Service personnel responsible for installing and maintaining designated devices associated with this storage system.

Conventions

The following conventions are used throughout this document:

- Unless otherwise specified, all references to VCS V3.020 refer to the software package (kit) and documentation. These software packages and documentation support VCS V3.020.
- *The System Software for Enterprise Virtual Array* is the storage system software that contains Virtual Controller Software (VCS), Environmental Monitoring Unit (EMU) firmware, programmable component images, diagnostics, and message files. This storage system software is usually represented by a four-digit number like V3.020.
- Unless otherwise specified, all references to an HSV110 controller or an HSV110 controller pair should be interpreted as the HSV110 or HSV100 controller or controller pair.
- Unless otherwise specified, all references to the Enterprise Storage System or storage system should be interpreted as the EVA5000 or the EVA3000.
- Unless otherwise specified, all references to rack should be interpreted as the 9000-Series Enterprise Storage System Rack.
- Unless otherwise specified, all licensing references to host ID should be interpreted as the storage system world wide name (WWN).
- Unless otherwise specified, all references to the management appliance should be interpreted as the HP StorageWorks Management Appliance.
- Unless otherwise specified, all references to a single instance of a management agent should be interpreted as the HP StorageWorks Command View EVA.
- The term fabric means Fibre Channel Switched (FC-SW) connectivity.

New features

This section briefly describes new features and changes that are supported by the version 3.0E release of the platform kit.

New features for version 3.0E

The following are major enhancements included in the V3.0E release of the platform kit:

- HBA Ham Driver 6.51.2(b) is included with the kit.
- Support for VCS 3.020

Note: *NetWare for Enterprise Virtual Array Installation and Configuration Guide V3.0c* has not changed.

Enterprise Virtual Array storage system

This document contains the most recent product information about the Enterprise Virtual Array. An Enterprise Virtual Array storage system consists of the following:

- One pair of HSV110 controllers.
- An array of physical disk drives that the controller pair controls. The disk drives are located in drive enclosures that house the support systems for the disk drives.
- Associated physical, electrical, and environmental systems.
- Command View EVA, which is the graphical interface to the storage system. Command View EVA software resides on the management appliance and is accessed through a browser.
- Management appliance, switches, and cabling.
- At least one host attached through the fabric.

Enterprise Virtual Array system software

The HP StorageWorks Virtual Controller Software (VCS) V3.020 included in the software kit provides storage software capability for the HSV110 controller.

Enterprise Virtual Array documentation

The Enterprise *Virtual Array Catalog of Associated Documentation* is included on the HP Technical Documentation page. You can display a comprehensive list of Enterprise Virtual Array documentation as well as documentation for products that may be required to operate your storage system. To access the technical documentation, go to

http://h18006.www1.hp.com/products/storageworks/enterprise/documentation.html

Supported configurations

Refer to the *Enterprise Virtual Array Quick Specs* for supported configurations. The *HP StorageWorks SAN Design Reference Guide* is a detailed guide for SAN configurations and is available at

http://h18004.www1.hp.com/products/storageworks/san/documentation.html

Adobe Acrobat Reader

Adobe Acrobat Reader is required to read .pdf documentation in the kit. It can be downloaded from http://www.adobe.com/products/acrobat/readstep2.html.

Supported operating systems

The Enterprise Virtual Array storage system is compatible with the following operating systems:

- Tru64 UNIX
- Windows NT/Windows 2000/Windows Server 2003 (32- and 64-bit)
- OpenVMS
- Sun Solaris
- HP-UX
- IBM AIX
- Linux
- Novell NetWare

Table 1 lists the operating system's specifications.

Note: Table 1 contains current minimum level operating system specifications at the time of the Enterprise Virtual Array V3.020 release. Some component versions may change due to revision. For the latest information, go to http://h18006.www1.hp.com/storage/index.html

Table 1: Operating Systems Specifications

Platform	OS version		FCA (HBA)	Adapter firmware	Adapter driver
Novell Netware	5.1[1]	1.01	FCA2210 FCA2214	1.34	6.51b
	6[2]	1.6	FCA2210 FCA2214	1.34	6.51b
	6.5[3]	1.7	FCA2210 FCA2214	1.34	6.51b

1. Novell NetWare version 5.1 requires Service Pack 7
2. Novell NetWare version 6 requires Service Pack 4
3. Novell NetWare version 6.5 requires Service Pack 1

Switch support

This kit supports the Fibre Channel switches and firmware versions listed in the *HP StorageWorks SAN Design Reference Guide* at http://h18000.www1.hp.com/products/storageworks/san/documentation.html

Note: HP recommends that you do not mix switch firmware versions in your SAN. It is considered a best practice to uniformly upgrade all switches in the SAN.

Multiple path support

Novell NetWare with EVA storage requires the installation of StorageWorks Secure Path on each host to achieve high availability multiple path capability. Secure Path is licensed on a per-host basis. Refer to the HP StorageWorks Enterprise Virtual Array 5000 specifications page for Secure Path versions at

http://h18006.www1.hp.com/products/storageworks/enterprise/specifications.html

Single path support

Novell Netware servers require a single FCA to support single path mode.

Note: Single path mode should not be used in mission critical environments.

Supported servers

All Novell NetWare certified servers are supported.

Operating constraints

Any operating constraints specific to the Enterprise Virtual Array hardware and Command View EVA can be found in their respective release notes.

HBA driver web site

Find and download the latest HBA drivers supported by HP for storage arrays at

http://h18006.www1.hp.com/products/storageworks/fca2210/index.html

Avoiding problem situations

The following sections describe problems that may arise during platform kit operation and their solutions.

Command View EVA

The Command View EVA release notes contain information on problems pertaining to Command View EVA.

Enterprise Virtual Array version 3.020 hardware

The hardware release notes in your VCS kit contain information on problems pertaining to Enterprise Virtual Array hardware.

Using snapshot or snapclone with Novell Netware

When you create a snapshot or snapclone with Novell NetWare, the LUN is recognized by the NetWare host. However, if you present the LUN to the host, you cannot access it. To avoid this problem, present the snapshot/snapclone to a different host. For example:

You have a unit presented on NetWare Host A and would like to make a snapshot or snapclone of it. If you present this new unit to Netware Host A, it sees it. However, because it is identical to an existing unit, the host assumes that the two are a broken software mirrorset. NetWare deactivates both devices and informs you that there is a possible broken mirrorset. However, if you present the snapshot/snapclone unit to NetWare Host B, you can access the new unit on that host.

You may also choose to present the snapshot/snapclone to a host at a later time, or not at all.

Avoiding problem situations with the SSSU

Changing comments on a disk enclosure

You cannot use the SSSU to change comments on a disk enclosure. Use Command View EVA to change comments on a disk enclosure. If you try to change a disk enclosure comment in the SSSU, the following error message appears:

```
Error: Invalid Operation
```

Changing the name of a disk enclosure

Changing the name of a disk enclosure is not supported with the SSSU or with Command View EVA. If you try to change a disk enclosure name in the SSSU, the following error message appears:

```
Error: Invalid Operation
```

Using the proper support pack with the SSSU

If `sssunlm.nlm` is used on Novell NetWare without the proper support pack installed, it will generate a critical failure on the second run. This error may require a server reboot. This is due to up-to-date libraries during creation of the executable, and the Novell NetWare OS needs to be updated as well. Refer to Table 1 for a list of Novell NetWare support packs.

Enterprise Storage System notes

Cable requirements

When an Enterprise Virtual Array is connected to a 1Gb switch, an SC-to-LC cable is required for host connectivity. Table 2 and Table 3 list the available cables.

Table 2: LC-SC cables

Length	Description	HP part number
2.0 m ± 40 mm	CA ASSY, LC-SC, Optical 2M	187891-002
5.0 m ± 80 mm	CA ASSY, LC-SC, Optical 5M	187891-005
15.0 m ± 150 mm	CA ASSY, LC-SC, Optical 15M	187891-015
30.0 m ± 300 mm	CA-ASSY, LC-SC, Optical 30M	187891-030
50.0 m ± 500 mm	CA-ASSY, LC-SC, Optical 50M	187891-050

Table 3: LC-LC cables

Length	Description	HP part number
2.0 m ± 40 mm	2-meter LC-LC Multi-Mode Fibre Cable	221692-B21
5.0 m ± 80 mm	5-meter LC-LC Multi-Mode Fibre Cable	221692-B22
15.0 m ± 150 mm	15-meter LC-LC Multi-Mode Fibre Cable	221692-B23
30.0 m ± 300 mm	30-meter LC-LC Multi-Mode Fibre Cable	221692-B26
50.0 m ± 500 mm	50-meter LC-LC Multi-Mode Fibre Cable	221692-B27

Storage System Scripting Utility for Enterprise Virtual Array

Refer to the *Command View EVA Release Notes* prior to using the Storage System Scripting Utility (SSSU), as SSSU communicates directly with the Command View EVA.